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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Robert A. Murgita

Art Unit:

1647

Serial No.:

08/879,469

Examiner:

Stephen Gucker

Filed:

June 20, 1997

Customer No.:

21559

Title:

RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL

PROLIFERATIVE AGENT

Mail Stop Petition Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

TRANSMITTAL OF FORMAL DRAWINGS TO OFFICIAL DRAFTSPERSON

In reply to the Notice of Allowability that was mailed in connection with the above-captioned case on March 21, 2003, and with reference to the Notice of Allowance that was mailed on March 21, 2003, having confirmation number 9547, enclosed are:

Five sheets of formal drawings that replace the informal drawings filed with the application include the changes required by the Official Draftsperson.

If there are any other charges or any credits, please apply them to Deposit Account No.

03-2095.

-1. W

Respectfully submitted,

Date: 28 July 2004

TODO ARMSTRONG, Ph.D. REG. NO. 54, 590

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			;	1/5				•	
	181 glu cys gaa TgC	151 his pro CAT CCC	121 gln val CAA GTT	91 his ser CAT TCA		31 phe phe TTT TTT	ATTRIBET	· mmomographocaccactgccaataacaaaataactagcaacc	
	phe TTC	phe	pro	asp	gln	ala	his CAT	型	
	C CA e g1	le CP	gli GA	cys TGC	1 Se	gl: CA	arg	Š	
	gln thr	leu tyr CTG TAT	glu pro GAA CCT	s cys	ser ser TCT TCA	gln phe CAG TTT	g asn A AAT	CIG	
	gln thr lys CAA ACA AAG	r ala T GCA	o val T GTC	s ser	r 91	e val T GTT	n glu T GAA	CCAA	
	s ala	a pro A CCT	1 thr C ACA	r gln C CAA	gly cys	1 gln T CAA	u tyr A TAT	TAAC	
	ala ala GCA GCA	o thr	r ser A AGC	n ser A AGT	s leu T TTA	n glu A GAA	r gly	AAAA	
	a thr 2A ACA		r cys	r glu T GAA	u glu A GAA	u ala A GCC	y ile A ATA	TAAC	
	thr val	160 ile leu ATT CTT	130 s glu T GAA	100 u glu A GAG	70 u asn A AAC	40 a thr C ACT	10 ile ala ATA GCT	TAGC	
	0 1 thr M ACA	1 leu T CTT	0 u ala A GCA	0 u gly G GGA	0 n gln C CAG	0 T tyr	0 a ser T TCC	AACC	
		e de la companya de l	a tyr A TAT	y arg A AGA	n le	r lys C AAG	r ile C ATA	-19 met ATG	
	lys glu AAA GAA	trp ala	r glu T GAA	g his a	A CC	s glu G GAA	e le A Th	9 t lys g aag	
į	lys glu leu arg AAA GAA TTA AGA	a ala T GCT	u glu A GAA	s as T AA	n leu pro ala G CTA CCT GCC '	u val A GTA	e leu asp ser A TTG GAT TCT	e tr	
_	u arg	a arg	u asp A GAC	asn cys	a phe	val ser GTA AGC	T TC:	trp val	
>		g tyr C TAT	p arg	s phe r TTT	e leu T CIG	r lys C AAA	r ty: I TA(l glu G GAA	
	A AG	r asp r GAC	g glu 3 GAG	e leu P CTT	ı glu 3 GAA	met	tyr gln TAC CAA	glu ser GAA TCA	•
	C %ei	lys	thr ACA	ala FGCA	ı glu 1 GAA	G val	1 cys	ile ATT	
	c leu C Tio	ile ATA	phe TTC) his	l leu CTT	val lys	ACT	phe	
	200 g glu ser ser leu leu a h GAA AGC AGC TTG TTA <i>l</i>	170 ile ATT	140 met ATG	lys AAA	TGC 80	GAS 5	C 20	leu TTA	
	asn gln his a A AAT CAA CAT	Pro pro	asn	lys AAG	his	p ala leu thr r GCA TTG ACT	glu GAG	-10 ile ATT	
	gln	ser	lys AAA	000 pro	glu GAG	leu	ile ATA	phe leu TTC CTA	
	his CAT	cys TGC	phe	thr ACT	lys AAA	thr	ger AGT	leu CTA	
	ala	cys TGC		E Pr	glu GAA	ala GCA	leu ala asp leu arra GCT GAC CTG	leu CTA	
	сув	lys ala AAA GCT	tyr TAT	ala ser ile GCA TCG ATC	ile ATT	ile ATT	ala GCT	asn phe	
	ala GCA	ala GCT	glu cac	ser	leu TTG	glu GAG	asp GAC	phe TT	
	val	glu GAA	ile ATA	ile	glu GAG	lys aaa	leu CTG	AC #5	
	met	asn AAT	ala GCA	CCA pro	lys AAG	ile glu lys pro	ala GCT	glu GAA	
	ala cys ala val met lys GCA TGT GCA GTA ATG AAA	ala GCA	ile tyr glu ile ala arg ATT TAT GAG ATA GCA AGA	pro leu	tyr TAC	pro thr CCC ACT	thr	TCC Ter	
	210 asn AAT		arg AGG	Tic Tic	glu ile leu glu lys tyr gly GAA ATT TTG GAG AAG TAC GGA	gly GGA	ile ATA	arg AGA	- A
	(731)	(641)	(551)	phe rrc (461)	(371)	(281)	u ala thr ile G GCT ACC ATA (191)	thr glu ser arg ACT GAA TCC AGA (101)	(2)
	5	Ξ.	Ξ	=	Ξ	Ξ	Ξ	÷	Ξ

(2)



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ala CCA asp GAT 241 leu CTG 421 391 TAC TAC TCT ser 361 leu Tra 301 271 211 Phe TTT gln CAG Teu glu GAA gln CAA asp gly Yle TTG leu TTG GAT CIG glin CAA val CTG ala CCA glu GAG ala GCA lys AAA ACC Thr ACC PE ser GAC CAC ala GCC lys AAG lys AAG Dro pro arg ICG arg his CAT phe TTT cys TGT g lu GAA ACT ACT ser TCG ser AGC TTC val GTT gly GCT CTG val GTA TTC add glu GAG ngc 1gc gln CAG his CAT er TCA his CAT gln CAA leu CTA Cic 91y ACT glu GAA ser TCT asn AAC glu GAG ala GCC ATG CTC glu GAA tyr Tan pro CCA his CAC lys AAA ile ATA 370 asn AAC ala GCC phe TTC 340 ser TCA 310 asn AAT 280 ile ATA 250 cys TGT 220 thr ACT 430 gln CAG ile ATC CC pro thr ACA TGC val GTT arg AGA leu CTA 14 SS lys AAA Leu CTT asn AAC ACT arg AGA glu GAA arg AGA arg AGA leu glu GAA his CAT AGG TGC gly GGA lys AAA ngc Sys CT pro gly GGA lys AAA asp GAT CIG phe TGC 845 met ala glu GAA gln CAG leu TTA gln CAA ser ACT lys AAA val GTG tyi Tat asp GAT CTT gly GGA CTG CES Tel gln CAG ala thr TAC ala lys AAA asp GAT asp GAT lys AAG 14 S leu TTA gly GGA val GTC ACG ACG arg AGA ıçı Ter TTT edq ala GCA gln CAA glu GAA ser TCA asp GAT CTG ACC ACC Cig ala GCC 410 asn AAT 380 GAA 290 glu GAA gln CAG 230 1ys AAA 320 phe TTT 350 val GTA ACT glu GAA asn AAC CGI asp GAT val GTT ala GCG ile Att igi g phe TTT leu TTA leu CTA gln CAA gly GCT 939 V16 asn AAT 166 853 CIC Len gln CAG arg AGA phe TTT gla CAA GAA phe gln CAA val lys AAA val CTT ICI. ser TGT lys AAA ACT GIT CIC ala CCT ser TCA TAC ala GCT ile Ata ile ATC glu ser ACT ile ATC ile ATT TAC lys AAA 939 At6 met ATG ile ATC g La CAG GAG thr ACA gly GGA glu his CAT JCC Ter gln CAG lys AAG glu GAG TAC lys AAA ala GCA TAC TAC lys AAA ser AGC gln CAG lys AAA lys AAA asn AAT glu GAA ile ATA leu CTA 330 ile CTA (1451) GCC (1361) CAA (1271) GAG (1181) AAT (1001) 270 cys TGT ATC (1091) 300 asn (911)(821)

Fig. 1B



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ttcattcgctc <u>tcaa</u> acttttctctttaattttaac <u>tca</u> tttaacactttttggaattaatgaaa <u>tgataa</u> agacttttatgtgagatttcct	571 val GTC	541 lys AAG	511 lys AAG	481 cys TGC	451 leu TTG
TTCG	TGC	pro CCA	phe TTC	cys TGC	ala GCC
CICI	phe TTT	gln CAA	ile ATT	thr ACT	cys TGT
GAAC	ala GCT	ile ATA	Phe ITC	ser	239 718
TTT	glu GAA	thr ACA	his CAT	ser TCA	glu GAG
CICI	glu GAG	glu GAG	lys AAG	tyr TAT	gly GGA
YTA	gly	glu GAA	asp GAT	ala GCC	ala GCG
(TTT)	gln CAA	gln CAA	leu CTG	asn AAC	ala CCT
PAACI	lys AAA	leu CTT	cys TGC	arg AGG	asp GAC
IGATI	580 leu CTG	550 glu GAG	520 gln CAA	490 arg AGG	460 ile ATT
TAAC	ile ATT	ala CCT	ala GCT	CCA	ile Att
ACTI	ser TCA	val GTC	gln CAG	cys TGC	ile MTC
Prr.	lys AAA	ile ATT	gly Gct	phe TTC	gly GGA
TGAA	thr ACT	ala GCA	val GTA	ser	his CAC
TTAA	arg	asp GAT	ala GCG	ser AGC	leu TTA
TGAA	ala GCT	phe TTC	leu CTG	leu TTG	cys TCT
ATGA	ala GCT	ser	gln CAA	val GTG	ile ATC
TAMA	leu TTG	gly 660	thr Acc	val GTG	arg
GACT	gly GGA	leu CTG	met ATG	asp Gat	his CAT
TTTA	590 val GTT	560 leu TTG	530 lys AAG	500 glu GAA	470 glu GAA
TCTG	ter TAA	glu GAG	gln CAA	thr ACA	met ATG
AGAT	ATT	lys Aaa	glu GAG	tyr Tat	thr ACT
TTCC	Attactt	cys TGC	phe TTT	val GTC	CCA pro
TTAT	CAGG	TGC	leu CTC	L))	val GTA
CACA	GGAA	gln CAA	ile ATT	pro	asn AAC
GAAA	GAGA	gly GCC	asn AAC	ala GCA	LOD
TAAA	AGAC	gln CAG	leu CTT	phe	gly GCT
ATAT	AAAA	glu GAA	val GTG	ser	val CTT
CTCC	CGAG	gln CAG	lys AAG	asp GAT	339 AT ⁶
AAA	TCT	glu GAA	gln CAA	STO ASP GAC	480 gln CAG
tatcacagaaa <u>taa</u> aatatctccaaa (2027)	CAGGGGAAGAGAAAAAAAAAAGAGTCT (1908	570 cys gln gly gln glu gln glu TGC CAA GGC CAG GAA CAG GAA(1811)	540 leu ile asn leu val lys gln CTC ATT AAC CTT GTG AAG CAA(1721)	510 pro pro ala phe ser asp asp CCT CCT GCA TTC TCT GAT GAC(1631)	480 val asn pro gly val gly gln GTA AAC CCT GGT GTT GGC CAG(1541)
3	=	٦	5	ב	٥

Fig. 1C



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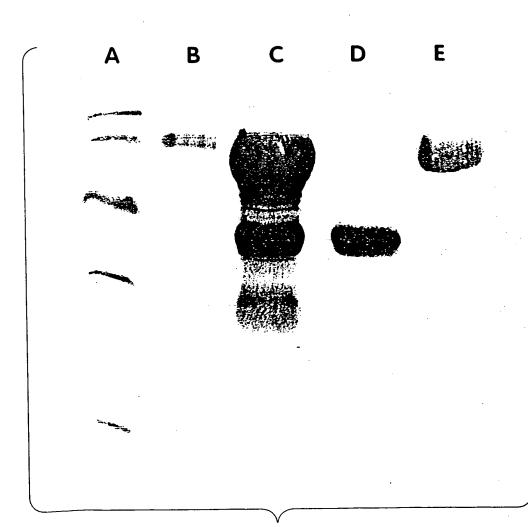


Fig. 2



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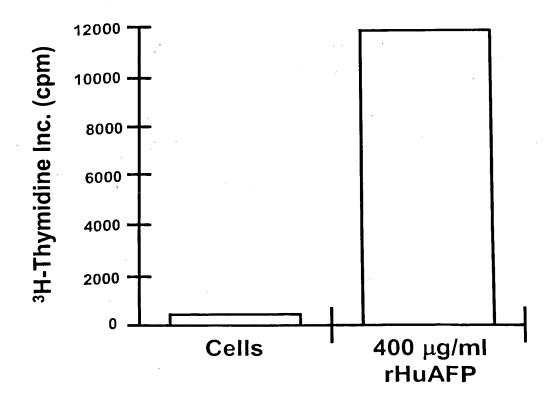


Fig. 3